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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,722	06/29/2001	Daniel G. Stearns	CIL-10843	8725

7590

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EXAMINER

BROWN, CHARLOTTE A

ART UNIT

PAPER NUMBER

1765

DATE MAILED: 12/18/2002

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/896,722

Applicant(s)

Stearns et al.

Examiner

Charlotte Brown

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 29, 2001
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 36 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-25 and 36, drawn to a method for repairing an amplitude defect in a multilayer coating, classified in class 216, subclass 66.
 - II. Claims 26-35, drawn to an apparatus for repairing an amplitude defect in a multilayer coating, classified in class 156, subclass 345.4.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as not etching away the damaged region that remains after removal of the defect.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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3. During a telephone conversation with John Woodbridge on December 12, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-25 and 36. Affirmation of this election must be made by applicant in replying to this Office action. Claims 26-35 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1-25 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thilderkvist et al. (US 6,227,194) in view of Montcalm et al. (US 5,958,605).

Thilderkvist discloses a method for in-situ cleaning of surfaces in a substrate processing chamber. A platform includes a base and a covering layer wherein the platform has been exposed to contaminants. Particles are present on the covering layer. The particles can potentially cause defects in the wafers or substrates. This reads on the applicant's limitation of a defect selected from the group consisting of a particle, a shallow pit, and a scratch. A layer of material including silicon can be applied on top of the platform. During the application of the silicon containing layer, particles can diffuse into the layer during the high temperature process of applying the layer. Coating of the platform is preferably performed at temperatures greater than about 1000°C (Column 9, lines 50-67). Figure 9 of the drawings shows that particles have been collected by the silicon containing layer (126) from the covering layer (124). The method includes a step of removing the layer after the particles have been collected. This reads on the applicant's limitation of etching away the damaged region (Column 10, lines 42-53).

Unlike the claimed invention, Thilderkvist does not teach a step of removing a defect from a multilayer coating.

Montcalm discloses a passivating overcoat bilayer or multilayer reflective coatings for extreme ultraviolet lithography. The multilayer coating is typically made of a stack of alternating layers of molybdenum and silicon or molybdenum and beryllium (Column 3, lines 1-6). The present invention may also encompass a third layer to form a trilayer. The trilayer is made up of a

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bottom layer , a protective top layer, and an intermediate layer deposited between the top and bottom layers (Column 3, lines 33-40).


It is the Examiner's position that a person having ordinary skill in the art would have found it obvious to modify Thilderkvist with the method of using a multilayer coating as taught by Montcalm since Thilderkvist is not particular about the type of covered layer or coating used in his process and therefore the use of a multilayer coating would have been expected in order to achieve a reasonable expectation of success.

7. Any inquiry concerning this communication from the Examiner should be directed to Charlotte A. Brown whose telephone number is 703-305-0727. The Examiner can normally be reached during the hours of 9:00AM to 6:30PM.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

CAB

December 12, 2002


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